

# INTERNATIONAL ISO/IEEE STANDARD 11073-10404

Second edition  
2022-12

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## Health informatics — Device interoperability —

### Part 10404: Personal health device communication — Device specialization — Pulse oximeter

*Informatique de santé — Interopérabilité des dispositifs —*

*Partie 10404: Communication entre dispositifs de santé personnels —  
Spécialisation des dispositifs — Oxymètre de pouls*

[ISO/IEEE 11073-10404:2022](https://standards.iso.org/iso-ieee-11073-10404-2022)

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**IEEE Std 11073-10404™-2020**  
(Revision of IEEE Std 11073-10404-2008)

**Health informatics—Personal health device communication**

# **Part 10404: Device specialization— Pulse oximeter**

Developed by the

**IEEE 11073™ Standards Committee**

of the

**IEEE Engineering in Medicine and Biology Society**

Approved 30 January 2020

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**Abstract:** Within the context of the ISO/IEEE 11073 family of standards for device communication, this standard establishes a normative definition of communication between personal telehealth pulse oximetry devices and compute engines (e.g., cell phones, personal computers, personal health appliances, set top boxes) in a manner that enables plug-and-play interoperability. It leverages appropriate portions of existing standards including ISO/IEEE 11073 terminology, information models, application profile standards, and transport standards. It specifies the use of specific term codes, formats, and behaviors in telehealth environments restricting optionality in base frameworks in favor of interoperability. This standard defines a common core of communication functionality for personal telehealth pulse oximeters.

**Keywords:** IEEE 11073-10404™, medical device communication, personal health devices, PHD, pulse oximeter

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## Introduction

This introduction is not part of IEEE Std 11073-10404-2020, Health informatics—Personal health device communication—Part 10404: Device specialization—Pulse oximeter.

ISO/IEEE 11073 standards enable communication between medical devices and external computer systems. This document uses the optimized framework created in IEEE Std 11073-20601-2019™ and describes a specific, interoperable communication approach for the pulse oximeter.<sup>1</sup> These standards align with, and draw on, the existing clinically focused standards to provide support for communication of data from clinical or personal health devices.

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<sup>1</sup> Information on references can be found in Clause 2.

**Contents**

1. Overview .....12  
 1.1 Scope .....12  
 1.2 Purpose .....12  
 1.3 Context .....12

2. Normative references.....13

3. Definitions, acronyms, and abbreviations .....13  
 3.1 Definitions .....13  
 3.2 Acronyms and abbreviations .....14

4. Introduction to ISO/IEEE 11073 personal health devices .....14  
 4.1 General .....14  
 4.2 Introduction to IEEE 11073-20601 modeling constructs.....15  
 4.3 Compliance with other standards.....15

5. Pulse oximeter device concepts and modalities .....16  
 5.1 General .....16  
 5.2 Device types .....16  
 5.3 General concepts.....16  
 5.4 Collected data .....17  
 5.5 Derived data.....19  
 5.6 Stored data .....19  
 5.7 Device configurations.....19

6. Pulse oximeter DIM .....20  
 6.1 Overview .....20  
 6.2 Class extensions.....20  
 6.3 Object instance diagram .....20  
 6.4 Types of configuration.....21  
 6.5 MDS object.....22  
 6.6 Numeric objects.....26  
 6.7 Real-time sample array (RT-SA) objects.....36  
 6.8 Enumeration objects .....37  
 6.9 PM-store objects .....41  
 6.10 Scanner objects .....45  
 6.11 Class extension objects .....48  
 6.12 Pulse oximeter information model extensibility rules .....48

7. Pulse oximeter service model .....48  
 7.1 General .....48  
 7.2 Object access services.....48  
 7.3 Object access EVENT REPORT services .....52

8. Pulse oximeter communication model.....52  
 8.1 Overview .....52  
 8.2 Communications characteristics .....52  
 8.3 Association procedure .....53  
 8.4 Configuring procedure.....55  
 8.5 Operating procedure .....56  
 8.6 Time synchronization .....57

|   |    |
|---|----|
| 9. Test associations .....                              | 57 |
| 9.1 Behavior with standard configuration.....           | 57 |
| 9.2 Behavior with extended configurations .....         | 58 |
| 10. Conformance .....                                   | 58 |
| 10.1 Applicability .....                                | 58 |
| 10.2 Conformance specification .....                    | 58 |
| 10.3 Levels of conformance .....                        | 58 |
| 10.4 Implementation conformance statements (ICSs) ..... | 59 |
| Annex A (informative) Bibliography .....                | 63 |
| Annex B (normative) Additional ASN.1 definitions .....  | 64 |
| Annex C (normative) Allocation of identifiers .....     | 65 |
| Annex D (informative) Message sequence examples .....   | 67 |
| Annex E (informative) PDU examples.....                 | 69 |
| Annex F (informative) Revision history.....             | 81 |

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